wherein each thickness of said first and said second layers is determined by multiplying by an even number one fourth of quantum-wave wavelength of carriers in each of said first and said second layers and said carrier accumulation layer has a band gap narrower than that of said second layer;

C1

wherein a kinetic energy of said carriers which determines said quantum-wave wavelength is set at a level near the bottom of a conduction band and a valence band of said second layer, according to the case that said carriers are electrons and holes, respectively; and

wherein a quantum-wave wavelength λ_W in said first layer is determined by a formula $\lambda_W = h/[2m_W (E+V)]^{1/2}$, a quantum-wave wavelength λ_B in said second layer is determined by a formula $\lambda_B = h/(2m_B E)^{1/2}$, said thickness of said first layer D_W is determined by a formula $D_W = n_W\lambda_W/4$, and said thickness of said second layer D_B is determined by a formula $D_B = n_B\lambda_B/4$, where h, m_W, m_B, E, V, and n_W and n_B represent Plank's constant, an effective mass of said carrier in said first layer, an effective mass of said carrier in said second layer, a kinetic energy of carriers flowing into said second layer, a potential energy of said second layer to said first layer, and even numbers, respectively. --

Please add new Claim 32 as follows:

C2 --32. (New) A light-receiving device according to Claim 1, wherein $E \leq V/9$.--

D1